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The relationship between body image and self-esteem in older adulthood

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**The Relationship between Body Image and Self-Esteem
in Older Adulthood**

Lucie Guegan

“A report submitted in Partial Fulfilment of the Requirements for the Award of

Bachelor of Arts Honours,

Faculty of Computing, Health and Science,

Edith Cowan University.

October 2006

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The relationship between body image and self-esteem in older adulthood

Abstract

Australia's population is ageing rapidly from 12% aged over 65 in 1999 to 25% by 2052. For this reason, the examination of factors related to older adult's wellbeing is becoming increasingly important. Empirical evidence indicates that body image and self-esteem are variables that are highly relevant to the quality of life of males and females of all ages but research pertaining to these factors among older adults has been neglected. The purpose of this paper is to review findings from empirical research concerning body image, self-esteem and their relationship, with particular focus on older adults within the context of Western society. Although older women remain dissatisfied with their bodies they may benefit from ageing as they reach a stage in their lives where they are no longer exposed to social pressures emphasizing the importance of appearance. Conversely, evidence suggests that the ageing process negatively affects older men, as they are likely to focus on factors related to body functioning rather than appearance. This shift in focus, therefore, suggests that the meaning and experience of the body changes with age. Limitations of the literature reviewed are discussed as well as the need for further investigation of body image and self-esteem as a means to address issues of population ageing.

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August 24th, 2006

The relationship between body image and self-esteem in older adulthood

Australia is experiencing considerable demographic changes, as the first cohort of baby-boomers will reach the age of 65 over the next decade (Commonwealth of Australia, 2001). Given the significant implications of the increasing proportion of older Australians in the population (from 12.4% in 2004 to 25% by 2052) taxing the nation's welfare services and health care system (Department of Education, Science and Training [DEST], 2003; Logie, Hogan, & Peut, 2004), the examination of factors related to older adult's wellbeing is important.

Body image, which can be defined as "a multidimensional construct encompassing self perceptions and attitudes regarding one's physical appearance" (Cash, Morrow, Hrabosky, & Perry, 2004, p. 1081) is thought to "hold[s] important premises for understanding fundamental issues of ageing and identity" (Krauss Whitbourne & Skultety, 2002, p. 83). Yet, research has primarily viewed body image as a young woman's issue. As a result, body concerns amongst women, aged 18 to 25 years are well documented (Grogan, 1999), but very little is known about men's body image, and much less about older adults.

Of all the personal attributes that influence the development of body image, Cash (2002) suggests that "self-esteem may be the most pivotal" (p. 41). This relationship between body image and self-esteem has been verified on a number of occasions (e.g. Paxton & Phythian, 1999; Webster & Tiggemann, 2003) and it has been further demonstrated that particular aspects of body image (e.g., perceived physical attractiveness) are positively correlated with self-esteem (Davidson & McCabe, 2005). Despite indications that self-esteem and body image are factors that may contribute significantly to one's general wellbeing (Cash & Fleming, 2002), the development of

self-esteem in old age as well as the relationship between body image and self-esteem within older adults have received little attention.

To this end, the purpose of this paper is to review the findings from empirical research concerning body image, self-esteem and their relationship with a particular focus on older adults. Studies that have specifically examined body image in either older women or older men will be reviewed followed by a discussion about gender differences. Subsequently, the literature pertaining to lifespan developmental trends and gender differences in relation to self-esteem will be reviewed. The relationship between body image and self-esteem will then be discussed. Finally, the limitations of the current literature will be highlighted and directions for future research will be suggested.

It will be shown that body image and self-esteem are highly relevant to the quality of life for both males and females at all ages but that more research is needed to confirm their salience among older adults. Addressing this gap may have applied implications for professionals working with older people and in the development of preventative and therapeutic interventions to help older adults develop a body image that is acceptable to them and does not contribute to psychosocial difficulties that may hinder their quality of life.

Body image among older adults

Ageing inevitably takes people's body further away from Western society's cultural ideal of thinness (Lamb, Jackson, Cassidy, & Priest, 1993) or muscularity (Lien, Pope, & Gray, 2001) and youthfulness (Bordo, 1993). As such, it is reasonable to expect that body image dissatisfaction will increase with age (Hurd, 2000; Tiggemann, 2004). In addition to the realities of wrinkles, loss of skin elasticity and declining physical abilities (Hurd, 2000; Tiggemann, 2004) people typically put on weight (about 4.6kgs per decade) through their adult life span (Andres, 1989, cited in Tiggemann,

2004) making the attainment of the ideal body increasingly difficult if not impossible, as people age.

Wilcox (1997) and others (e.g. Grogan, 1999; Rodin, Silberstein, & Striegel-Moore, 1984) have pointed out that women's physical appearance is a fundamental factor for gaining status and value in society, whereas men may gain status from a wider array of qualities including, intelligence, wealth, or power. In support of such claims, Buss (1994) who investigated mate preferences indicated that women rated a man's ability to provide stability and financial security higher than their physical attractiveness. Despite these arguments, it seems important to consider that over the past few decades an evolutionary shift may have occurred, whereby women are becoming increasingly independent financially and no longer need to rely on men as a source of stability and financial security (Ettcoff, 2000).

Yet, research pertaining to body image appears to have served a confirmatory rather than an exploratory purpose in favouring gender stereotypically entrenched beliefs restricted by cultural meanings of beauty or attractiveness. As such, this 'double standard of ageing' whereby physical signs of advanced age are more harshly judged in women than in men (Wilcox, 1997) is likely to be particularly problematic for older women who may expect, or be expected to, achieve and maintain the standards of physical attractiveness against the odds posed by the ageing process (Hurd, 2000; Tiggemann, 2004).

Body image among older women

It is well documented that women are more likely than men to experience body image dissatisfaction (Davidson & McCabe, 2005; Öberg & Tornstam, 1999; Striegel-Moore & Franko, 2002), in fact it has been argued that "poor body image has become so entrenched in the feminine gender-role in our society that it is considered 'normative'" (Dionne, Davis, Fox, & Gurevich, 1995, p. 277). Whilst feminist researchers argue that

women's near obsessive quest for the perfect bodily appearance is due to male-dominated ideologies (Morgan, 1991, cited in Grogan, 1999) in combination with the media promoting unrealistic beauty standards (Chapkis, 1986, cited in Grogan, 1999) it is nonetheless a reality within Western societies.

As girls enter puberty, body image concerns become more prominent and by mid-adolescence it is common for girls to report weight dissatisfaction, fear of further weight gain and preoccupation with losing weight (Field et al., 1999). A large amount of research has shown that body image concerns persist throughout late adolescence and into early adulthood (Striegel-Moore & Franko, 2002) and a recent study suggests that women of all ages struggle with issues related to changes in their body shape (Tiggemann & Lynch, 2002).

It has also been acknowledged that women face challenges unique to their gender throughout their lives that affect their body image (Striegel-Moore & Franko, 2002). During adulthood, for instance, pregnancy and particularly the postpartum years are said to be times of increased body image concerns (Heinberg & Guarda, 2002). Menopause is also believed to increase concerns about femininity and sexuality, thereby affecting body image satisfaction (Fookien, 1994; Krauss Whitbourne & Skultety, 2002).

Despite the argument that ageing inevitably takes people further away from the culturally defined thin and youthful ideal body (Lamb et al., 1993), Feingold and Mazzella (1998) have suggested that women are likely to benefit from the ageing factor as they reach a stage where they are no longer exposed to social pressures emphasizing the importance of appearance, as looks become generally less important in older adulthood. But only a handful of studies have considered older women's body image and the ones that have only partially support this assumption. Indeed, research indicates that older women's body dissatisfaction remains high (Stevens & Tiggemann, 1998;

Tiggemann & Lynch, 2002), suggesting that women's discontent with their bodies remains relatively stable across the life span.

Body image dissatisfaction has been empirically linked to a number of adverse psychosocial consequences including maladaptive eating behaviour and dieting (Stice, 2002), social anxiety (Cash & Fleming, 2002; Davidson & McCabe, 2005), depression (Davidson & McCabe, 2005), impaired sexual functioning (Davidson & McCabe, 2005; Fookien, 1994), diminished quality of life (Cash & Fleming, 2002) and poor self-esteem (Fookien, 1994; Webster & Tiggemann, 2003). But it is suggested that contrary to younger women, older women, despite their body dissatisfaction remaining high, are psychologically less affected by body image factors.

One explanation for the lesser effect of body image on psychological variables for older women may be that they compare themselves to realistic prototypes rather than to thin and youthful ideals (Grogan, 1999). Such explanation is consistent with findings from studies in which participants were required to rate silhouette drawings of figures ranging from very underweight to very overweight (Lamb et al., 1993; Stevens & Tiggemann, 1998). Stevens and Tiggemann, for instance, who compared the ideal figures chosen by women in a younger group (18-29 years, $N = 41$) to women in an older group (50-59 years, $N = 23$) found that the perceived ideal figure was larger among the older group.

Exceptions to the general finding of stable body dissatisfaction across the adult life span for women do, however, emerge in a few studies, which have included women aged 65 and over in their sample. For example, Öberg and Tornstam (1999), who surveyed more than 1000 women aged 20 to 85 years, found that women aged 65 to 85 years rated the item 'I am satisfied with my body' more positively than younger women. Similarly, Hetherington and Burnett (1994) who investigated desired weight and body satisfaction in a sample of 50 women aged 60 to 78 ($M = 67.3$) also found increased

body satisfaction in this group. Both studies, thereby lending support to Feingold and Mazzella (1998)'s argument that, in relation to the negative effects of body image, women are likely to benefit from the ageing process. Nonetheless, it should be noted that the statement 'I am satisfied with my body' is general and may therefore be interpreted differently by older women (relating it to functional abilities) and younger women (relating it to physical appearance).

Interestingly, Öberg and Tornstam's (1999) 65 to 74 years group rated 'my looks are important to me' higher than any other group, followed by the 75 to 85 years group who rated this item at the same level as the 20 to 24 years group. The 65 to 74 years group also rated the item 'I worry about how my looks will change as I grow older' higher than any other group, which as the authors suggest, may coincide with a point in time where women become increasingly "conscious of, and anxious about, impending age-related changes in appearance" (p. 637). It seems likely then that standards or criteria for body evaluation may change at a certain age and while women may remain dissatisfied with their bodies, the factors that influence such perceptions and attitudes, such as appearance or health status, may change.

Research conducted by Janelli (1993) investigating gender differences in body image among a sample of 89 older adults aged 60 to 98 years ($M = 76$ years) found that the body parts older women were most dissatisfied with included their eyes, hands, fingers, and legs, in addition to their body weight. Whilst these body parts are usually exposed, they are also very important in terms of body function. This may therefore suggest a shift to focusing on functional rather than appearance aspects of their bodies.

In another study investigating age differences in body attitudes between young adults ($M = 19$ years, $SD = 1.3$) and older adults ($M = 74$ years, $SD = 7.2$), Franzoi and Koehler (1998) found that older adults expressed less positive attitudes than young adults toward their body in terms of body functioning (e.g. physical coordination,

agility, sex drive and health). Hence, lending support to research indicating a progressive decline in perceived bodily function efficiency with advancing age (Lakatta, 1990, cited in Franzoi & Koehler, 1998).

Similarly, Reboussin et al. (2000), who examined correlates of body image satisfaction among middle-aged (aged 35 to 54 years, $N = 580$) and older adults (aged 55 to 75 years, $N = 274$), concluded that there is a clear distinction between body function and body appearance for older adults and that they may value the former more than the latter. This general trend is also supported by in-depth interviews with older women. For instance, recent research investigating how people of different ages feel about and understand their bodies indicates that older women's health and physical ability appear to greatly influence their body image satisfaction (Underwood, 2005).

Whilst decline of the body's functional ability and increased health concerns appear to contribute significantly to older women's evaluation of their body, body size and weight often remain major sources of dissatisfaction as well. Hurd Clarke (2002) who explored dieting and desired body weight in a sample of 22 women aged 61 to 92 years reported that when asked to describe the one thing that concerned them most about their bodies, the majority of participants discussed their weight as a main source of dissatisfaction.

Whilst the participants in Hurd Clarke's (2002) study primarily expressed such weight dissatisfaction in terms of their physical appearance they tended to justify their need to lose weight in terms of health risks and benefits rather than in terms of seeking to achieve a beauty ideal. Interestingly the author argued that despite the health benefits of weight loss being often the stated reason for needing to lose weight, appearance was nonetheless women's key motivation.

This argument is consistent with previous research suggesting that older women have a complex and uneasy relationship between their ageing bodies (chronological

age) and their sense of self (felt age) (Hurd Clarke, 2001; Tunaley, Walsh, & Nicolson, 1999). As a result of these mixed feelings, discrepancies between how older women express their feelings towards their body and how they rationalise the way they experience their body appear to be common.

Dieting is a frequent response to the seemingly persistent wish to lose weight, whether for physical appearance or health reasons. In a study exploring the relationship between women's desired weight and their eating behaviour, Allaz, Bernstein, Rouget, Archinard and Morabia (1998) found that 30.5% of their sample of women aged 65 to 74 years ($N = 242$) had dieted in the last 5 years, even though 62% of them were of normal weight. Whilst the frequency of dieting does appear to decrease with age (Allaz et al., 1998; Tiggemann & Lynch, 2002) this remains common practice among older women for whom, given their vulnerability to nutritional deficiencies, dieting may pose a serious health risk and threat to good health (Hetherington & Burnett, 1994; Tiggemann, 2004). Thus, physical appearance seems very important to older women as they may jeopardize their health attempting to lose weight.

Body image among older men

Perhaps due to the common belief that cultural influences and pressures of appearance and beauty standards only apply to women, research regarding men's body image has been neglected. As a result, body image concerns among men have generally been reported to be insignificant, implying that men are exempt from the pressures of having the ideal body shape experienced by women (Cash & Green, 1986). Recent research, however, suggest otherwise (Kostanski, Fisher, & Gullone, 2004; Olivardia, 2002).

Kostanski et al. (2004), for instance, who investigated body image satisfaction among 431 children ($M = 8.4$ years, $SD = .96$) and 515 adolescents ($M = 14.66$ years, $SD = 1.66$) indicate that contrary to previous suggestions, body image dissatisfaction is

not a concern reserved for females. In accord with other researchers (e.g. McCabe & Ricciardelli, 2004; Olivardia, 2002), the authors suggest that from a young age, males want to lose weight while at the same time become larger and more muscular, thereby wanting to conform to the cultural ideal of a mesomorphic V-shaped body with broad shoulders and a slim waist.

Men's increased concerns about their body image may be due to a shift in women's position within society (Ettcoff, 2000) allowing women to be increasingly selective in the mates they chose (Olivardia, 2002). As Dutton (1995) suggests, in Western society muscles symbolise traditional masculine traits such as strengths, power, dominance, and sexual virility. For this reason, it could be argued that the shift in women's position within society has resulted in a loss of traditional gender roles for men who in order to maximise their potential for mate selection, seek to achieve a physical appearance that is in accord with masculinity.

Whether older men are affected by these issues is unclear but there is evidence to suggest that the ageing process negatively affects older men's body image. Research conducted by Paxton and Phythian (1999) indicates that as they age, men are more likely than women to experience a decrease in feelings of attractiveness. But similarly to women, the factors that influence men's perceptions and attitudes regarding their physical appearance seem to change as they get older (Franzoi & Koehler, 1998; Underwood, 2005). Thus, elderly men are more likely than younger men to express less positive attitudes toward their body, but to do so in terms of factors associated with body functioning (e.g. physical coordination, agility, and health) rather than appearance.

In contrast, Abadie, Shuler, Hunt, and Lischkoff (1996) investigated discrepancies between current and ideal body shape in a sample of 110 men aged 55 to 90 years ($M = 66.8$) and found that older men did convey a desire to be thinner. Abadie et al. (1996) further suggested that older men who engaged in physical activity were

likely to be motivated to do so in order to maintain a body shape ideal, hence suggesting that culturally defined general physical appearance does matter to older men. This also indicates that men may also experience a complex and uneasy relationship between their ageing bodies (chronological age) and their sense of self (felt age) similar to the one that Hurd Clarke (2002) and Tunaley et al. (1999) found in women that was discussed earlier.

Gender Differences in Body Image

Despite increasing concerns about men's body image, women are undoubtedly the group that is most often judged according to standards of body ideals. On this basis it should be expected that women will not only express more body image concerns than men throughout their lives but that they will also be increasingly dissatisfied with their bodies as the process of ageing takes them further from the thin and youthful ideal. Hence, any gender differences in body image, particularly on factors related to appearance should become increasingly noticeable with advancing age.

Consistent with this, the majority of body image researchers have reported that women are indeed more dissatisfied with their body images than are men (e.g., Davison & McCabe, 2005; Demarest & Allen, 2000; Janelli, 1993; Öberg & Tornstam, 1999; Tiggemann, 1992) with only a few (Silberstein, Striegel-Moore, Timko, & Rodin, 1988; Wilcox, 1997) finding no such difference. None of the studies reviewed reported opposite findings.

In a recent study examining age and gender differences in body image with 276 adults (130 men and 146 women) aged 20 to 80 years ($M = 49.8$, $SD = 17.2$), Hubley and Quinlan (2005) found that there were few differences across age with the exception of older individuals who were more likely to be concerned about the impact of ageing on appearance. In terms of gender differences, Hubley and Quinlan found differences on nearly all body image measures. In accord with the majority of prior research (e.g.,

Davison & McCabe, 2005; Demarest & Allen, 2000), the authors reported that relative to men, women put more emphasis on appearance and consequently report more involvement in appearance-related, as well as weight control, activities.

Whilst using several body image scales, Hubley and Quinlan (2005), like many others, primarily focused on appearance related scales and hence neglected other aspects of body image, such as health and fitness. The importance of considering other aspects of body image (in addition to appearance) has been demonstrated by a study conducted by Paxton and Phythian (1999). Taking into account these multidimensional aspects of body image, Paxton and Phythian surveyed 159 men and 122 women aged 40 to 79 years ($M = 56.4$, $SD = 10.8$) and found that along the age continuum surveyed, women were more health conscious than men and that in turn their health status influenced the way in which they viewed their body.

Paxton and Phythian (1999) also indicated that older men were more affected by their declining fitness abilities than were women. This factor was again highlighted by Halliwell and Dittmar (2003) who conducted in-depth interviews with 42 men and women (aged 22–62 years) in the aim to explore their relationships with their bodies and also found distinctive gender differences. Whilst both men and women considered ageing to have a negative impact, men were relatively neutral to changes in appearance and tended to focus more on the physical and functional abilities of their body. Women, on the other hand, despite reporting that societal demands for attractiveness did lessen with age, focused mainly on appearance.

Hence, while appearance is an integral part of body image, which should not be ignored when examining gender differences, it may nonetheless be important to look at a wider range of factors that influence individuals' perceptions and attitudes towards their own bodies. This may be particularly relevant when examining gender differences

in older adults' body image, given that the factors that influence their attitude towards their body appear to differ from that of younger adults.

Section summary

In sum, contrary to adolescents and young adults whose body image satisfaction is primarily dependent on their appearance, older adults' body image satisfaction (for both men and women) seems to be mediated by health and physical and functional abilities (Franzoi & Koehler, 1998; Underwood, 2005). This, however, does not imply that older people see their appearance as unimportant but that they are less concerned about others' evaluation and they are also less likely to compare their appearance to others (Davidson & McCabe, 2005). While the ageing experience is clearly different for women and men, the gender differences in body image, which increase from adolescence and early adulthood, appear to decrease later in life (Franzoi & Koehler, 1998).

Although research on men and older adults is limited, the existing literature suggests that body image is an important concern for both men and women throughout the lifespan (Halliwell & Dittmar, 2003). The indication that the nature of body image concerns reported by men and women may change as people get older (Halliwell & Dittmar, 2003; Underwood, 2005) as well as the indication that body image dissatisfaction may be linked to adverse psychological consequences (e.g. depression and poor self-esteem) highlights the need to further investigate body image concerns in relation to ageing.

As noted earlier, self-esteem is argued to be influential in the development of body image (Cash, 2002) and its relationship with body image has been verified on a number of occasions. As a result, body image and self-esteem are variables that are highly relevant to the quality of life of both males and females. In order to gain a better

understanding of the salience of these factors the following section will present a review of the literature pertaining to self-esteem with a particular focus on older adults.

Self-esteem

Self-esteem, which can be defined as “the overall affective evaluation of one’s worth, value or importance” (Blascovich & Tomaka, 1991, p. 115), is one of the most frequently researched variables in psychological investigations (Kling, Hyde, Showers, & Buswell, 1999). Viewed as an essential component of mental health (Kling et al., 1999), high self-esteem has been linked to enhanced functioning in multiple psychological domains (see Baumeister, 1998, for review) including: Occupational success, healthy social relationships, subjective well-being, positive perceptions by peers, persistence in the face of failure, and improved coping and self-regulation skills. Conversely, low self-esteem has been linked to a number of problematic outcomes, including antisocial behaviour, depressive symptoms, and health problems (Baumeister, 1998).

Findings have, nonetheless, varied over time, resulting in a lack of consensus on several aspects (Robins, Trzesniewski, Tracy, Gosling, & Potter, 2002). For instance, some researchers have argued that self-esteem is a relatively stable trait-like construct (e.g., Rosenberg, 1989) whereas others have argued that it should be conceptualised as a state-like process that continually fluctuates (e.g., Leary & Baumeister, 2000).

The scarcity of research examining self-esteem in older adults was demonstrated by Trzesniewski, Donnellan and Robins (2003) who conducted a meta-analysis of 50 published articles, only two of which examined self-esteem after the age of 40. As a result and in addition to the lack of consensus, described above, it has also been argued that research has provided little evidence that could lead to an accurate picture of changes in self-esteem across the lifespan (Robins et al., 2002).

Three recent studies (Robins et al., 2002; Trzesniewski et al., 2003; Trzesniewski, Robins, Roberts, & Caspi, 2004) have sought to address this issue and indicate that self-esteem is indeed a relatively stable trait-like construct in that those who have high self-esteem at one point in time are likely to have high self-esteem throughout their lives. Nonetheless, these studies also indicate a developmental trend of self-esteem, whereby changes experienced by most individuals, such as puberty and cognitive decline in old age produce normative shifts in self-esteem across the lifespan.

The development of self-esteem: lifespan trends

A large cross sectional study conducted by Robins et al. (2002), which involved 326,641 individuals aged 9 to 90 years, indicated that during childhood there appears to be a consistent trend of relatively high self-esteem up to about seven years of age, followed by a gradual decline over the course of childhood. This decline continues during adolescence to reach its lowest point between the ages of 18 to 22. Self-esteem is thought to rise gradually thereafter throughout adulthood reaching a peak during older adulthood (65 years) (Robins et al., 2002). Thus, other than early childhood, the mid-60s seem to represent the apex of self-esteem across the lifespan. During old age, beginning around age 70, there appears to be a sharp decline in self-esteem (Robins et al., 2002) which is similar to that occurring during childhood and adolescence.

A number of factors have been proposed as possible reasons for these apparent fluctuations, for instance, maturational changes associated with puberty (Harter, 1993) have been suggested to explain adolescents' decline in self-esteem. Likewise, a number of changes that generally occur during old age, including spousal loss, decreased social support, and a downward shift in socioeconomic status are thought to contribute to the observed decline in self-esteem in later life (Baltes & Mayer, 1999).

In discord with these explanations, Pearlman (1993) theorised that the physical changes that occur during late mid-life, between the ages of 50 and 60, affect one's

physical and sexual attractiveness and create a disruption in self-esteem. This developmental transition labeled “late mid-life astonishment” (p. 2) highlights the existence of a relationship between body image and self-esteem in older adulthood. The author also suggested that women are particularly vulnerable during this period because of the cultural emphasis on youthful appearance.

Given that most studies are cross-sectional, it is possible that the decline in self-esteem found in older participants could be due to a cohort effect (Robins et al., 2002). Additionally, only a few studies have examined the development of self-esteem in old age and the trends indicated by Robins et al. contradict prior studies. For instance, Pliner, Chaiken, and Flett (1990) found that in their sample ranging from 10 to 79 years, self-esteem increased with age. Similarly, Paxton and Phythian (1999) found that self-esteem increased with age for females, but not for males. Whilst Pliner et al.’s and Paxton and Phythian’s studies are smaller than that of Robins et al.’s, they demonstrate that findings concerning older adults’ self esteem are varied and need to be interpreted with caution.

Gender differences

Research suggests that although both males’ and females’ self-esteem appear to follow the same trend, a gender gap emerges by adolescence, in that adolescent boys have higher self-esteem than do adolescent girls. This gap persists throughout adulthood and then narrows again during old age (Kling et al., 1999; Robins et al., 2002; Trzesniewski et al., 2003). Robins et al. also indicate that by age 70, men and women report similar levels of self-esteem but in contrast to Pearlman’s (1993) theory, they indicate that the gender difference reverses in older groups with women in their 80s reporting slightly higher self-esteem than men of the same age.

Section summary

In sum, until recent years, research findings on self-esteem lack consensus on several aspects (Robins et al., 2002) and only a few recent studies indicate a trend of the trajectory of self-esteem across the lifespan. The indication of a substantial decline in self-esteem, occurring during both adolescence and old age, suggests that there may be something common to both periods (e.g., the confluence of multiple social and physical changes) (Robins & Trzesniewski, 2005) but further research is needed to confirm the proposed trends, particularly regarding self-esteem in older adults. The relationship between body image and self-esteem is the focus of the next section.

The relationship between body image and self-esteem

According to Cash (2002), the salience of self-esteem in terms of its influence on body image may be pivotal. Self-concept theories also suggest that dissatisfaction in a particular domain (e.g., body image) will have an impact on self-esteem (Webster & Tiggemann, 2003). Congruently, a number of studies have reported that body dissatisfaction is associated with low self-esteem in men and women of all ages (Stormer & Thompson, 1996; Stowers & Durm, 1996). Longitudinal studies have also indicated that body dissatisfaction predicts low self-esteem (Stice & Bearman, 2001; Stice, Hayward, Cameron, Killen, & Taylor, 2000). The samples employed by these studies, however, were of children, adolescents or undergraduate students who were followed for a short period of time (i.e., less than two years).

Few studies have investigated the relationship between body image and self-esteem among older adults and even fewer have included men in their samples. Tiggemann (2004) suggests that if appearance and weight become less important as women get older, it could be expected that the relationship between body image and self-esteem would become weaker in older age. Yet, research studies that have included

middle aged and older women in their sample indicate that body image dissatisfaction remains related to lower self-esteem.

In a study which aimed to predict levels of restrained eating in a sample of 145 women aged 30 to 60 years ($M = 43.22$, $SD = 7.52$) Paa and Larson (1998) found a negative correlation between body image and self-esteem. Tiggemann and Stevens (1999) who investigated the correlates of weight concerns in a sample of 180 women aged between 18 and 59 years ($N = 180$) also found a significant negative correlation between weight concerns and self-esteem but only for women aged 30 to 49. Similarly, Webster and Tiggemann (2003) reported a moderate significant negative correlation between body dissatisfaction and self-esteem but more so for younger women (aged 20 to 35) and middle added women (aged 35 to 50) than for older women (50-65 years). Based on these studies, it would appear that body image does become less important to older women as they age and should therefore have less effect on their self-esteem.

Grogan (1999) suggests that "signs of ageing in men may be seen to make them look distinguished" (p. 128). As such, it could be expected that, similar to women, the relationship between body image and self-esteem in older men may weaken as they age. Contrary to this proposition, however, research suggests that men are more likely to experience the ageing process in a negative way, especially in terms of declining functional abilities (Franzoi & Koehler, 1998; Paxton & Phythian, 1999; Underwood, 2005).

While the different pattern of correlations between several aspects of body image and self-esteem, provided by the above studies suggests that the meaning and experience of the body change as women age (Tiggemann & Stevens, 1999), they do not provide a clear picture of such relationships in men or women aged 65 and above. Investigating such relationships in a sample of 437 men and women aged 18 to 86 years ($M = 42.26$, $SD = 17.11$) Davidson and McCabe (2005) found that body image was

associated with self-esteem for all groups (i.e., young adulthood, 18–29 years, middle adulthood, 30–49 and late adulthood, 50–86 years), but unlike previous research (e.g., Tiggemann & Stevens 1999; Webster & Tiggemann, 2003) the authors found no significant age or gender differences.

Investigating the relationship between self-esteem and various body image variables in middle-aged and older adults, Paxton and Phythian (1999) found a significant positive correlation between appearance evaluation (overall feelings of physical attractiveness), fitness evaluation (overall feeling of being physically fit), health evaluation (overall feelings about one's health), health orientation (extent of investment in a healthy lifestyle) and self-esteem for both males and females. Paxton and Phythian further reported that for females, health evaluation, appearance evaluation, and health orientation contributed significantly to the prediction of self-esteem, whereas only health and fitness orientation did so for men.

In sum, evidence indicates that self-esteem and body image may be highly correlated for both men and women. The small amount of research that has examined the relationship between these factors in older adults supports this argument but suggests that different body image variables are positively correlated with self-esteem depending on gender. The limitations of the literature pertaining to body image and self-esteem are discussed in the following section.

Limitations of the research on body image and self-esteem

There are several limitations, both methodological and conceptual, to the existing literature regarding body image and self-esteem. Although it is recognised that the concept of body image may be very valuable in understanding fundamental problems related to ageing and identity (Krauss Whitbourne & Skultety, 2002), the wide majority of research has focused on adolescents and young adults (Cash & Pruzinsky, 2002). Similarly, research pertaining to self-esteem has generally focused on

adolescents and young adults (Trzesniewski et al., 2003). This has resulted in several gaps in the literature, particularly regarding older adults (Cash et al., 2004; Cash & Pruzinsky, 2002; Halliwell & Dittmar 2003; Krauss Whitbourne & Skultety, 2002; Tiggemann, 2004).

Despite indications that men are not exempt from cultural pressures of having the ideal body shape (Cash & Green, 1986) and evidence pointing towards increasing body image concerns among men (Kostanski, Fisher, & Gullone, 2004; Olivardia, 2002) body image has mainly been viewed as an issue relevant only to women. As a result, little is known about men's body image (McCabe & Ricciardelli, 2004; Tiggemann, 2004). Additionally, the few studies that do include men in their sample generally do so in addition to women (Underwood, 2005). As such, these studies may have failed to consider factors (e.g. muscularity and fitness) that may be more salient for men (Paxton & Phythian, 1999).

Investigations of women's body image are also limited, as they mainly focused on appearance or on factors of body image that are potentially associated with eating behaviour, such as body weight and shape (Davidson & McCabe, 2005; Striegel-Moore & Franko, 2002; Paxton & Phythian, 1999, Tiggemann, 2004, Underwood, 2005) and neglected the role body image plays in day to day life. As a result, these studies may have failed to examine a broader range of body image factors, such as health, which appear to be particularly salient in older adulthood (Paxton and Phythian, 1999; Underwood, 2005).

Some appearance related factors of body image have been largely ignored. For instance, it seems likely that the more controllable aspects of personal grooming such as hair care, clothing and make-up would become more salient to older women (Cash & Pruzinsky, 2002; Tiggemann, 2004). Yet, with the exception of Jackson and O'Neil's (1994) study, which provided some initial indication that older women did draw on

everyday appearance-management behaviours to counter the effects of growing old, this variable has received little attention. In addition, researchers' focus on physical appearance of body image has in many ways confirmed and reinforced cultural stereotypes in favour of gender stereotypically entranced beliefs restricted by cultural meanings of beauty and attractiveness.

The need to broaden the focus of body image research has been highlighted on many occasions. With only few exceptions (e.g. Paxton & Phythian, 1999; Underwood, 2005; Wade & Cooper, 1999), most studies have utilised narrow operational definitions, thereby failing to capture the multidimensional aspects of body image (Cash & Pruzinsky, 2002).

It should also be pointed out that with the exception of Stice and Bearman (2001) and Stice et al. (2000) all the studies pertaining to body image and/or self-esteem that have been reviewed thus far have used cross-sectional designs rendering them vulnerable to cohort effects. By definition, cohort effects may occur due to the unique historical and societal influences experienced by various age groups (Cavanaugh & Whitbourne, 1999). This may be of particular relevance to older samples that grew up at a time where the emphasis on thinness and media influence on body image was not as prevalent as it has been for later cohorts (Webster & Tiggemann, 2003). It should, nonetheless, be acknowledged that cross-sectional studies are simpler to execute both temporally and financially than longitudinal studies. As such, one way to counter the issue of cohort effects may be to conduct repeated cross-sectional studies.

Finally, all the studies reviewed in this paper have reported their findings using age groups (e.g. middle age, old age) which, in terms of age groupings, vary greatly from one study to the next and are in some cases very broad (e.g. 50 to 86 years). As such it is difficult to pinpoint where body image concerns may occur, peak, stabilise, or decrease during different stages of the lifespan (Striegel-Moore & Franko, 2002).

Suggestions on how future research may address these limitations are the focus of the following section.

Directions for future research

In order to expand on the current knowledge regarding body image, future research should seek to include men and older adults within their samples. It is important, however, to keep in mind that the factors underlying body image satisfaction may differ as a function of both age and gender. For this reason, future research should also seek to investigate body image using multidimensional operational definitions that encompass more than physical appearance and include variables such as health and fitness (Cash & Pruzinsky, 2002; Tiggemann, 2004).

Even though a wide variety of assessment tools measuring body image are available, the majority of these have been used only with samples of adolescents and young women. Hence, in order to target wider groups (that include men and older adults) it is necessary to establish the validity and reliability of the measures with these populations (Rusticus & Hubley, 2005). As noted earlier, with regards to Öberg and Tornstam's (1999) study, the wording of statements such as 'I am satisfied with my body' can be interpreted differently across age. As such, survey research and other self-report instruments should take particular care in making statements clear, explicit and relevant to their target audience. Furthermore, in order to facilitate the identification of when body image concerns may occur, peak, stabilise, or decrease during different stages of the lifespan, future research should also attempt to compare more restricted age groups rather than endeavour to cover broad age slices (Schaie, 2000).

Given the limited developmental understanding of both body image and self-esteem, future research should also consider conducting longitudinal studies (Cash & Pruzinsky, 2002; Tiggemann, 2004). Such research would enable observations of developmental changes whilst minimising cohort effects. One methodology that has

been successful in combining longitudinal and cross-sectional designs is that used in the Seattle Longitudinal Study (SLS). The SLS began in 1956, with 500 participants aged from early 20s to late 60s. From a longitudinal perspective participants were followed at seven year intervals but were also, at each interval joined by a new group of participants. To date, approximately 5000 people have participated in the SLS (Schaie, 1996).

Despite the fact that cohorts may differ, a more pressing issue, relevant to the demographic changes Australia is currently experiencing, is the investigation of body image and self-esteem within the baby boomers generation. As noted previously, the increasing proportion of older Australians in the population has significant implications for the nation's welfare services and health care systems (DEST, 2003; Logie et al., 2004). The examination of factors such as body image and self-esteem, that may contribute significantly to one's general wellbeing (Cash & Fleming, 2002), therefore, support the goals of the National strategy for an ageing Australia, namely, 'Ageing well Ageing productively'.

Conclusion

This paper has reviewed findings from empirical research concerning body image, self-esteem and their relationship with particular focus on older adults within the context of Western societies. It has been shown that body image and self-esteem are highly relevant to the quality of life of males and females of all ages but that more research is needed to investigate the salience of these factors among older adults.

Given the demographic changes Australia is currently experiencing narrowing this gap as a means to address issues of population ageing appears particularly important. Further understanding of body image, self-esteem and their relationship will inform professionals working with older adults and the development of preventative as well as therapeutic interventions. Such outcomes are likely to assist older adults to

develop a positive body image that will contribute to psychosocial strengths and enhance their quality of life.

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The relationship between body image and self-esteem in older adulthood

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“I declare that this written assignment is my own work and does not include:

(i) material from published sources used without proper acknowledgments; or

(ii) material copied from the work of other students”.

Signature: _____

The relationship between body image and self-esteem in older adulthood

Abstract

Purpose: Given the global trend of population ageing and the fact that Australia will experience a significant increase in the proportion of older adults, research into ageing issues has become a National priority. Whilst body image and self-esteem have been empirically linked, the relationship among older adults has been neglected. The present study investigated several body image variables and their relationship to self-esteem in a sample of older adults.

Design and Methods: Questionnaires consisting of the Rosenberg Self-Esteem Scale and the Multidimensional Body-Self Relations Questionnaire were administered to 148 adults aged between 65 and 85 years, living independently in the Perth metropolitan area, Western Australia.

Results: The relationship between body image and self-esteem does not appear to weaken as people age. Whilst the variables that influence body image may vary as a function of age and gender, the results of the present study indicate that body image remains a central issue to older adults, who continue experiencing cultural pressures to conform to youthful ideals. Whilst women appear to develop a range of strategies in an attempt to counter the effects of ageing, men appear to be more negatively affected by it, particularly in terms of factors associated with body functioning.

Implications: Professionals working with older adults could benefit from understanding the meaning of body image, the factors that could affect this concept, and how these may influence older adults' self-esteem. Such outcomes are likely to assist older adults to develop a body image that will contribute to psychosocial strengths and enhance their quality of life.

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The relationship between body image and self-esteem in older adulthood

Following global trends, the percentage of the Australian population aged over 65 is predicted to increase significantly, especially over the next decade, as the first cohort of baby-boomers will reach the age of 65 (Commonwealth of Australia, 2001). Given the significant implications of the increasing proportion of older Australians in the population (from 12.4% in 2004 to 25% by 2052) taxing the nation's welfare services and health care system (Department of Education, Science and Training [DEST], 2003; Logie, Hogan, & Peut, 2004), the examination of factors related to older adult's wellbeing is paramount.

Body image, that can be defined as "a multidimensional construct encompassing self perceptions and attitudes regarding one's physical appearance" (Cash, Morrow, Hrabosky, & Perry, 2004, p. 1081), is thought to "hold[s] important premises for understanding fundamental issues of ageing and identity" (Krauss Whitbourne & Skultety, 2002, p. 83). Yet, research has primarily viewed body image as young women's issue. As a result, body concerns amongst women, aged 18 to 25 years are well documented (Grogan, 1999), but very little is known about men's body image, and much less about older adults across gender.

Body image among older adults

Whilst ageing inevitably takes people's body further away from Western society's cultural ideal of thinness (Lamb, Jackson, Cassidy, & Priest, 1993) and/or muscularity (Lien, Pope, & Gray, 2001) and youthfulness (Bordo, 1993), Feingold and Mazzella (1998) have suggested that women are likely to benefit from ageing as they reach a stage where they are no longer exposed to social pressures emphasising the importance of appearance. Likewise, it has been suggested that "signs of ageing in men may be seen to make them look distinguished" (Grogan, 1999, p. 128), but the handful

of studies that have considered older adults' body image only partially support these assumptions.

Indeed, the majority of research suggests that women's discontent with their bodies remains relatively stable across the life span (Stevens & Tiggemann, 1998; Tiggemann & Lynch, 2002) but exceptions to this general finding emerge in a few studies that have included women aged 65 and over in their sample. Öberg and Tornstam (1999), for example, who surveyed more than 1000 women aged 20 to 85 years, found that women aged 65 to 85 years rated the item 'I am satisfied with my body' more positively than younger women. Similarly, Hetherington and Burnett (1994) who investigated desired weight and body satisfaction in a sample of 50 women aged 60 to 78 ($M = 67.3$) found increased body satisfaction in this group. Both studies, thereby lending support to Feingold and Mazzella's (1998) argument that, in relation to the negative effects of body image, women are likely to benefit from the ageing process.

Nonetheless, it should be noted that the statement 'I am satisfied with my body' is general and may therefore be interpreted differently by older women (relating it to functional abilities) and younger women (relating it to physical appearance). This shift to focusing on functional rather than appearance aspects of the body has been highlighted by a number of studies (Franzoi & Koehler, 1998; Janelli, 1993; Reboussin et al., 2000; Underwood, 2005).

For instance, Janelli (1993) who investigated gender differences in body image among a sample of 89 older adults aged 60 to 98 years ($M = 76$ years) found that the body parts older women were most dissatisfied with included their eyes, hands, fingers, and legs, in addition to their body weight. Whilst these body parts are usually exposed, they are also very important in terms of body function. Similarly, Reboussin et al. (2000), who examined correlates of body image satisfaction among middle-aged (aged 35 to 54 years, $N = 580$) and older adults (aged 55 to 75 years, $N = 274$), concluded that

there is a clear distinction between body function and body appearance for older adults and that they may value the former more than the latter.

Whilst using a variety of body image scales, the aforementioned studies primarily focused on appearance related scales, thereby neglecting multidimensional aspects of body image, such as health and fitness. The importance of including such factors was demonstrated by Paxton and Phythian (1999) who surveyed 159 men and 122 women aged 40 to 79 years ($M = 56.4$, $SD = 10.8$). They found that within this age group, the way women viewed their body was significantly influenced by the way they evaluated their health, and physical fitness was a significant determinant of how men viewed their body.

Hence, while appearance is an integral part of body image, that should not be ignored when examining gender differences, it seems important to look at a wider range of factors that influence individuals' perceptions and attitudes towards their own bodies. This may be particularly relevant when examining gender differences in older adults' body image, given that the factors that shape their attitude towards their body and how these are subsequently associated to their self-esteem appear to differ from that of younger adults (Paxton & Phythian, 1999).

The relationship between body image and self-esteem among older adults

Viewed as an essential component of mental health (Kling, Hyde, Showers, & Buswell, 1999), self-esteem, can be defined as "the overall affective evaluation of one's worth, value or importance" (Blascovich & Tomaka, 1991, p. 115). Whilst only few studies provide a clear indication of changes in self-esteem across the lifespan, Robins, Trzesniewski, Tracy, Gosling, and Potter (2002), who conducted a large cross sectional study involving 326,641 individuals aged 9 to 90 years, suggest that throughout adulthood, self-esteem rises gradually until the age of 65 when it reaches a peak but subsequently declines sharply after the age of 70.

A number of factors have been proposed as possible reasons for fluctuations in self-esteem across the lifespan. Highlighting the likely existence of a relationship between body image and self-esteem in older adulthood, Pearlman (1993) theorised that the occurrence of a developmental transition labeled “late mid-life astonishment” (p. 2) whereby the physical changes that occur during late mid-life, between the ages of 50 and 60, affect one’s physical and sexual attractiveness and create a disruption in self-esteem. Congruently, a number of studies have reported that body dissatisfaction is associated with low self-esteem in men and women of all ages (Stormer & Thompson, 1996; Stowers & Durm, 1996) but few studies have specifically investigated the relationship between body image and self-esteem among older adults and even fewer have included men in their samples.

Based on the assumption that appearance and weight become less important to older adults, it could be expected that the relationship between body image and self-esteem weakens with age (Tiggemann, 2004). Nevertheless, studies that have included middle aged and older women in their sample indicate that body image dissatisfaction remains related to lower self-esteem. For instance, Paa and Larson (1998), who conducted a study aiming to predict levels of restrained eating in a sample of 145 women aged 30 to 60 years ($M = 43.22$, $SD = 7.52$), found a negative correlation between body image dissatisfaction and self-esteem.

So whilst evidence indicates that self-esteem and body image may remain highly correlated for both older men and women there are only few studies that included people over the age of 65. In addition, the few studies that have investigated such variables with older adults reported their findings using age groups (e.g., middle age, old age) that vary greatly across studies in terms of the age range within them. It is thus difficult to pinpoint the stage at which body image concerns may take place, increase, stabilise, or decrease (Striegel-Moore & Franko, 2002).

In light of these observations, the scarcity of research pertaining to older adults' body image and self-esteem represents an important gap in the literature. Given the global trend of population ageing and the fact that Australia is experiencing a significant increase in the population of older adults, narrowing this gap is particularly important. To this end, the aim of the present study was to investigate several body image variables, self-esteem and the relationship between these in a sample of older adults, seeking to identify differences as a function of age and gender. Specifically, employing a sample of older men and women between the ages of 65 to 85 years, this research sought to answer the following questions: (a) Are there significant differences in body image satisfaction as people age? (b) Are there gender differences in body image satisfaction as people age? (c) Is self-esteem stable as people age? Is that so for both males and females? (d) Which body image variables best predict self-esteem? Are they the same for both males and females?

Method

Participants

Participants in this study were 50 males and 98 females living independently in the Perth metropolitan area, Western Australia. The age of participants ranged from 65 to 85 years. Participants were divided into three groups: A '65 to 71 years' group, which included 20 males ($M = 68.8$ years, $SD = 1.9$) and 34 females ($M = 68.0$ years, $SD = 1.9$); A '72 to 78 years' group, which included 18 males ($M = 74.4$ years, $SD = 2.0$) and 31 females ($M = 74.6$ years, $SD = 2.0$) and; A '79 to 85 years' group which included 12 males ($M = 82.4$ years, $SD = 1.8$) and 33 females ($M = 80.8$ years, $SD = 2.3$). This division, based on Schaie's (1996, 2000, 2004) Seattle Longitudinal Study (SLS) methodology, that combines longitudinal and cross-sectional designs, was carried out in order to allow the identification of the age at which body image concerns may take place, increase, stabilise, or decrease along the age continuum surveyed.

Reported postal addresses suggest that participants represented a wide range of socioeconomic backgrounds from various metropolitan areas (Australian Bureau of Statistics [ABS], 2000). Fifty-seven per cent of participants indicated they were originally from Australia, and 25 % indicated being born in the United Kingdom. The remaining 18 % were predominantly born in European countries.

Measures

The Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) was used to measure global self-esteem. This scale contains 10 items, for example "I feel that I have a number of good qualities". Responses were made on a 5-point Likert-type scale, from 1 = definitely disagree to 5 = definitely agree. This order was reversed from the original scale so that the RSES and Multidimensional Body Self Relations Questionnaire (MBSRQ; Cash 2000) presented similar scales to facilitate clarity and ease of responding. RSES items were scored in accord with this modification with positive items reversed. Final scores ranged from 1 to 5, with high scores indicating higher levels of self-esteem. This instrument has been widely used in research and has demonstrated good psychometric properties (See Blascovich & Tomaka, 1991, for review).

Nine subscales of the MBSRQ (Cash, 2000) were used to measure two dispositional dimensions, namely evaluation and orientation, in each of the three somatic domains of appearance, fitness and health/illness, as well as attitude towards being or becoming overweight and self-perceived weight.

Responses to the MBSRQ, which included 60-items, were made on a 5-point Likert-type scale, ranging from 1 = definitely disagree to 5 = definitely agree for items one to 57; 1 = never to 5 = very often for item 58 regarding frequency of dieting, and 1 = very underweight to 5 = very overweight for items 59 and 60 that ask about the respondent's perceived weight. Internal consistency for the MBSRQ items ranges

between $\alpha=.70$ and $\alpha=.89$ (Cash, 2000) and it includes items such as: Before going out in public I always notice how I look and, I often feel vulnerable to sickness.

Procedure

Having gained the approval of the Ethics Committee of the Faculty of Community Studies, Education and Social Sciences, Edith Cowan University, participants were recruited by the researcher at the 'Tuesday Morning Show' which is a weekly variety program sponsored by the City of Perth and the Office for Seniors Interests and Volunteering (OSIV). This weekly event, held at the Perth Town Hall, is targeted at people over 50 years of age and typically hosts about 200 older adults. Participants were also recruited via advertisements in the Council on The Ageing (COTA) newsletter as well as two community newspapers, and via word-of-mouth referrals.

Of the 'Tuesday Morning Show' attendees, those willing to participate, read an information letter that provided information about the research process and informed participants about their rights (e.g. anonymity, confidentiality, right to withdraw). Once this understanding was established, participants completed the questionnaire immediately. Those who responded to advertisements or word of mouth contacted the researcher and were subsequently mailed a participant pack comprising of the information letter and the questionnaire which they could complete at home and return via mail, in a postage-paid envelope that was provided. Participation in this study was voluntary and completion of the questionnaire took approximately 15 minutes. Completion of the questionnaire was thus taken as consent and no signed informed consent was required.

Of the 205 questionnaires distributed, 157 were returned, yielding a response rate of 76.6%. Of these, nine incomplete questionnaires were discarded leaving 148 usable questionnaires for analysis.

Data analysis

Data were collated and analysed using the Statistical Package for Social Sciences (SPSS) version 14 and manual calculations where appropriate.

Given that, conceptually and theoretically, respondents' score on the RSES and MBSRQ subscales were believed to be related and form part of a higher order construct of individuals' self-concept, multivariate analysis of variance (MANOVA) was the analysis of choice. Consequently, to answer research questions (a) (b) and (c) and examine sex and age differences on body image variables and self-esteem, a MANOVA was conducted with gender (male or female) and age group (65-71, 72-78 or 75-85) as the independent variables. The dependent variables were respondents' scores on the RSES and MBSRQ subscales.

To answer research question (d) and examine the relationship between self-esteem and body image variables, six multiple regressions were conducted with self-esteem as the criterion variable and the nine body image variables as predictors. The first regression included all respondents. The second include only those between 65-71 years, the third those between 72-78 years and the fourth those between 79-85 years. The fifth regression used only data from male respondents and the sixth used only data from female respondents. In accord with Tabachnick and Fidell (2001), no adjustments to alpha were required.

Results

Prior to analysis, all entries were examined for accuracy and missing values. Instances of missing data were replaced by the mean value of the appropriate age/gender group, as recommended by Tabachnick and Fidell (2001). No univariate outliers were identified. Detection of multivariate outliers was assessed using Mahalanobis distance. Two multivariate outliers (with $p < .001$) were detected and deleted, leaving 146 cases for analysis.

Internal reliability within the present sample for both measures was calculated using Crombach alpha with the RSES yielding .85 for men and .74 for women. Overall internal validity for the MBSRQ subscales was .91 for men and .89 for women.

A 2 x 3 MANOVA was conducted with gender (male or female) and age group (65-71, 72-78 or 79-85) as the independent variables and respondents' scores on the RSES and nine MBSRQ subscales as the dependent variables.

As there were unequal numbers of cases across cells and because it was assumed that differences in cell sizes reflected real processes in the population sampled, the SPSS regression method was used. Hence, each cell mean was given equal weight regardless of its sample size and each main effect and interaction was assessed after adjustments were made for all other main effects and interactions.

With the use of Pillai's trace criterion which is considered both conservative and robust against unequal cells for MANOVA (Tabachnick & Fidell, 2001), the combined dependent variables were significantly affected by both gender $F(10, 131) = 5.44$, $p < .05$ and age $F(20, 264) = 2.21$, $p < .05$, as well as their interaction $F(20, 264) = 2.13$, $p < .05$. These results reflect a high association between gender and the combined DVs, $\eta^2 = .71$, as well as a high association between age and the combined DVs, $\eta^2 = .71$. The association between the interaction of gender and age and the combined DVs was also high, $\eta^2 = .72$.

The univariate tests of the MANOVA showed a significant main effect for the interaction between gender and age in relation to self-esteem $F(2, 140) = 4.75$, $p < .05$, appearance evaluation $F(2, 140) = 4.89$, $p < .05$, fitness evaluation $F(2, 140) = 3.58$, $p < .05$, fitness orientation $F(2, 140) = 7.34$, $p < .05$, health orientation $F(2, 140) = 4.34$, $p < .05$, and illness orientation $F(2, 140) = 3.58$, $p < .05$. A significant main effect occurred for gender and appearance orientation $F(1, 140) = 33.48$, $p < .05$ as well as gender and overweight preoccupation $F(1, 140) = 18.45$, $p < .05$. There was also a

significant main effect for age in relation to self-esteem $F(2, 140) = 5.20, p < .05$, illness orientation $F(2, 142) = 3.59, p < .05$, and self-classified weight $F(2, 140) = 3.434, p < .05$.

As the assumption of homogeneity of variance for post hoc test was violated (Levene's test $< .05$), the Games-Howell procedure was used. It revealed that the 65-71 years group reported significantly lower levels of illness orientation than for the 79-85 years group ($M = 3.25, SD = .82$ and $M = 3.73, SD = .65$, respectively). The 72-78 years group's score for self-classified weight were significantly higher than those for the 79-85 years group ($M = 3.42, SD = .47$ and $M = 3.14, SD = .48$, respectively).

Hence in answer to question (a) it can be said that within the sample surveyed there were indeed significant differences on measures of body image between each age group, particularly in terms of illness orientation and self-classified weight.

A one way analysis of variance (ANOVA) was conducted in order to identify further differences. The ANOVA revealed significant effects for self-esteem $F(5, 140) = 4.23, p < .05$, appearance evaluation $F(5, 140) = 2.40, p < .05$, appearance orientation $F(5, 140) = 8.34, p < .05$, fitness orientation $F(5, 140) = 3.17, p < .05$, illness orientation $F(5, 140) = 3.73, p < .05$, and overweight preoccupation $F(5, 140) = 5.04, p < .05$.

Games-Howell's post hoc testing pertaining to the RSES indicated that males aged 65 to 71 reported significantly higher levels of self-esteem than all other groups. Means and standard deviations are presented in Table I. Post hoc tests concerning the MBSRQ subscales indicated that on measures of appearance orientation, males aged 65 to 71 years scored significantly lower than females aged 79 to 85 years. Males aged 72 to 78 years also reported being significantly less concerned with making efforts towards improving their physical appearance than did all other female groups. Males aged 79 to

85 years also scored significantly lower on the appearance evaluation scale than their female counterparts.

Insert Table I about here

Post hoc pairwise comparisons also showed that males aged 65 to 71 years scored significantly higher than their female counterparts on measures of fitness evaluation and fitness orientation. Males aged 65 to 71 years also reported significantly higher levels of investment in being physically fit than males in the 79 to 85 years group. With regards to health orientation, post hoc tests showed that males aged 79 to 85 years reported significantly less interest towards leading a healthy lifestyle than their female counterparts.

Post hoc pairwise comparisons pertaining to illness orientation showed that females aged 65 to 71 scored were significantly less alert to symptoms of physical illness than females in the 79-85 years group. With regards to overweight preoccupation, males aged 65 to 71 reported significantly higher levels of anxiety towards being or becoming overweight than males in the 79-85 years group. On this same scale, males aged 72 to 78 scored significantly lower than their female counterparts and males aged 79 to 85 reported significantly lower of preoccupation with their weight than all female groups.

Hence in answer to question (b) pertaining to gender differences in body image satisfaction as people age, it can be said that these results showed that within the sample surveyed, there are indeed significant differences in between males and females. Specifically, males and females, of some but not all age groups, differ significantly in terms of their satisfaction with their physical appearance; the evaluation of their physical fitness and investment in activities to maintain or increase their fitness level;

their orientation towards the importance of leading a healthy lifestyle; their responsiveness to signs of physical illness; and their preoccupation with being or becoming overweight.

In answer to question (c) concerning the stability of self-esteem as people age, these results show that within the sample surveyed females' self esteem remained stable from the age of 65 to 85. Males' self-esteem, however, decreased significantly between the age groups examined.

To answer research question (d) and examine the relationship between self-esteem and body image variables, six standard multiple regressions were conducted with self-esteem as the criterion variable and the nine body image variables as predictors.

Table II displays the correlations between the variables, the unstandardised regression coefficients (B) and intercept, the standardized regression coefficients (β), the semipartial correlations (sr^2) and R , R^2 , and adjusted R^2 pertaining to the first regression which included all respondents. R for the regression was significantly different from zero, $F(9, 136) = 7.161, p < .001$. Only two predictor variables, health evaluation, and appearance evaluation contributed significantly to the prediction of self-esteem with 11% of the variance being accounted for by the equation.

Insert Table II about here

Multiple regressions were conducted for all age groups. With regards to the 65 to 71 years age group (See Table III), R for the regression was significantly different from zero, $F(9, 42) = 5.318, p < .001$. Health evaluation was the only significant contributor to the prediction of self-esteem in the 65-71 years group, accounting for

12% of the variance. No variables contributed significantly to the prediction of self-esteem in either the 72-78 or 79-85 years groups.

Insert Table III about here

Multiple regressions were conducted for both genders. R for the regression including males only (See Table IV) was significantly different from zero, $F(9, 40) = 4.775, p < .001$. Health orientation and fitness evaluation were the only two variables which contributed significantly to the prediction of self-esteem in males. Together these two variables accounted for 14% of the variance.

Insert Table IV about here

R for the regression including females only (See Table V) was significantly different from zero, $F(9, 86) = 4.797, p < .001$. Only health evaluation and overweight preoccupation contributed to the prediction of self-esteem in females, with 13% of the variance being accounted for.

Insert Table V about here

Hence, in answer to research question (d), these results show that there are indeed body image variables that best predict self-esteem but these differ as a function of age and gender.

Discussion

The present study has considered a range of body image variables, self-esteem, and their relationship, amongst older adults aged 65 to 85 years.

Body image

The examination of age and gender differences in body image variables revealed different patterns in males and females, indicating that variables underlying body image satisfaction changes as people age, and as a function of gender.

In accord with research suggesting that women are likely to benefit from the ageing process as they reach a stage when they are no longer exposed to social pressures emphasising the importance of appearance (Feingold & Mazzella, 1998), females aged 79 to 85 years evaluated their physical appearance more positively than females aged 65 to 71 years. In terms of appearance orientation, however, females reported investing more time in their appearance as they aged; hence suggesting that physical appearance remains important to them. Although non significant, the effect size of this trend amongst females was .56 and power was .90. As previously suggested by others (e.g. Jackson & O'Neil, 1994), it is then likely that older women engage in the more controllable aspects of personal grooming such as hair care, clothing and make-up in an attempt to counter the effects of growing old.

In accord with previous research suggesting that men are more likely to be negatively affected by the ageing process and experience a decrease in feelings of attractiveness (Paxton & Phythian, 1999), males, in this sample, reported becoming increasingly dissatisfied with their physical appearance as they aged. But in contrast with previous reports (e.g., Davison & McCabe, 2005) and despite their increasing dissatisfaction with their appearance, males were not as likely as females to engage in appearance-related activities to improve their body. It is likely that this inconsistency of findings stems in part from the differing age range examined and the use of different measuring scales that may vary in their sensitivity.

Fitness is often viewed as a higher priority for men and accordingly, males aged 65 to 71 years reported feeling significantly more in shape, and more involved in

activities to enhance or maintain their fitness than their female counterparts. Whilst no other group differed significantly, one possible explanation for this observation is that the motive for men within this age group to engage in physical activity may be to maintain a certain body shape ideal.

Interestingly, however, an examination of the trends between age groups and gender revealed that men's evaluation of their physical fitness declined as they aged whereas women aged 79 to 85 evaluated their level of fitness more positively than women aged 65 to 71. Whilst neither of these trends reached statistical significance, an effect size of .53 and power of .90 for women suggest such results are not due to an inadequate number of participants. For men, this trend may be attributable to the limited sample size, as the effect size of .56 and power of .50 indicated that 29 participants would have been necessary to obtain a power of .90 and detect a statistical significance.

Nonetheless, significant trends pertaining to fitness orientation, that directly reflect the trends of fitness evaluation, confirm the consistency of respondents' overall feeling towards physical fitness. Indeed, males reported becoming significantly less involved in physical activities as they aged.

Given that physical fitness and muscularity are said to symbolise traditional masculine traits such as strengths, power, dominance, and sexual virility (Dutton, 1995), the decline in men's evaluation of, and investment in, their physical fitness as they age may be a reflection of their increased frustration, as ageing inevitably takes their body further away from Western society's cultural ideal. Alternatively, and in accord with previous research (Franzoi & Koehler, 1998; Underwood, 2005), these results may reflect older men's tendency to express negative attitudes toward their body, but to do so in terms of factors associated with body functioning.

Women, on the other hand, indicated becoming more involved in physical activities as they aged. Although non significant, the effect size for this trend was .48

and power was .80. Since physical appearance is a major motivator for individuals to exercise (Bane & McAuley, 1998), a possible explanation for women's increased investment in physical activity may be that taking part in physical activity is a strategy used in an attempt to counter the effects of growing old, similar to engaging in controllable aspects of personal grooming. Alternatively, these results may be an indication that females become increasingly health conscious as they age and therefore engage in physical activity seeking to maintain good health and body function.

In fact, the closeness of fitness and health as related concepts is highlighted by similar trends for these variables. While, overall, men evaluated their physical health more positively than females, females reported becoming increasingly health conscious as they aged whereas males became more apathetic about their health. Although neither of these trends reached statistical significance, the effect sizes were .76 and .52, reaching a power of .90 and .80 for men and women respectively.

Despite these gender differences, the overall relevance of health to older adults, reflected in the high scores for these subscales and the increased alertness to personal symptoms of physical illness across gender, support views that older adults' body image satisfaction is largely mediated by health and physical and functional abilities (Franzoi & Koehler, 1998; Underwood, 2005). Such findings are also in line with the increased vulnerability to a range of health problems (Janelli, 1993) that occur during older adulthood.

Although no significant differences were found across gender in terms of perceived weight, females reported higher levels of anxiety towards being or becoming overweight than did males. This gender difference which reached statistical significance for the 72 to 78 and 79 to 85 years, age groups is consistent with previous research (e.g. Hurd-Clarke, 2002; Paxton & Phythian, 1999) and suggests that older women may remain affected by cultural pressures to conform to a slim ideal (Hetherington &

Burnett, 1994). Hence, perhaps believing that losing weight will makes them look younger (Hubley & Quinlan, 2005), older women are, despite their vulnerability to nutritional deficiencies (Hetherington & Burnett, 1994; Tiggemann, 2004), likely to continue engaging in dieting and eating restraints.

In sum, like the majority of prior research on gender differences (e.g., Franzoi & Koehler, 1998; Hurd-Clarke, 2002; Paxton & Phythian, 1999), the present study found that women put more emphasis on appearance than men, but the fact that men reported becoming increasingly dissatisfied with their physical appearance as they aged indicates that the cultural pressures to conform to youthful ideals are experienced across genders.

As they age, women appear to invest more time in a range of strategies such as personal grooming, physical activity, and dieting in an attempt to counter the effects of growing old. Hence, suggesting that physical appearance remains particularly important to older women, even though they may inadvertently jeopardize their health by attempting to lose weight. Men, on the other hand, appear to surrender to the ageing process and be more negatively affected by it, particularly in terms of factors associated with body functioning.

Self-esteem

Results of the present study indicated that whilst older women's self-esteem remained stable between the aged of 65 to 85, older men's self-esteem declined significantly. In accord with previous research (Kling et al., 1999; Robins et al., 2002; Trzesniewski, Donnellan, & Robins, 2003) an examination of the self-esteem trends indicated that males aged 65 to 71 years reported higher levels of self-esteem than their female counterparts but that this gap narrowed as both 72-78 groups reported similar levels of self-esteem. The gender difference then reversed in older groups with women aged 79 to 85 reporting slightly higher self-esteem than their male counterparts.

There are several possible explanations for these findings. It is possible, for instance, that a number of changes that are generally associated with old age, including changes in roles (e.g., retirement), decreased social support, and a downward shift in socioeconomic status may contribute to a decline in self-esteem (Baltes & Mayer, 1999) and may affect men more significantly than women.

Alternatively, and as suggested by Pearlman (1993), it may be that the physical changes that occur during late mid-life, between the ages of 50 and 60, affect one's physical and sexual attractiveness and create a disruption in self-esteem. Whilst the present findings do not support this explanation for women, it is possible that women experience a decline in self-esteem prior to the age of 65 and then stabilise, as they adopt a variety of strategies to counter the effects of ageing.

The relationship between body image and self-esteem

In accord with research indicating the importance of health and functional abilities in older adults' perception of their body (Franzoi & Koehler, 1998; Underwood, 2005), significant predictors of males' self-esteem were health orientation and fitness evaluation. Hence, the tendency of men to become more apathetic about their health and, perhaps as a consequence, decrease their level of physical activity subsequently affects their self-esteem. Whilst such findings are consistent with research suggesting that declining functional abilities are likely to affect men's psychological wellbeing (Franzoi & Koehler, 1998; Underwood, 2005), it may also be that older men's self-esteem is affected by culturally defined aspects of general physical appearance (Dutton, 1995), which they can no longer achieve.

In addition to health evaluation, the strongest predictor of self-esteem in females was overweight preoccupation. This is consistent with previous research suggesting that although older women's perceived ideal figure is larger than that of young women (Stevens & Tiggemann, 1998), changes in body shape, weight awareness, and anxiety

about being or becoming overweight remains important throughout the lifespan (Janelli, 1993; Tiggemann & Lynch, 2002).

Despite claims that physical appearance is strongly associated with self-esteem (Paxton & Phythian, 1999; Pliner, Chaiken, & Flett, 1990), this variable was not found to be a significant predictor of women's self-esteem. Nonetheless, it is important to point out that appearance evaluation was one of the two significant predictor of self-esteem (in addition to health evaluation) for the sample as a whole. Hence highlighting that whilst there seems to be a shift in focus from physical appearance to physical abilities (health and fitness), appearance does remain an important criterion that is an integral part of body image throughout the lifespan.

Limitations

The findings presented in this study need to be interpreted within the context of a number of methodological limitations. Although the narrow age range used are likely to have minimised cohort effects (Schaie, 1996), this study used a cross sectional design and it is possible that cohort effect have had a bearing on body image perception. As this study is the first to focus specifically on older adults aged 65 to 85, replication of these findings is required, particularly in longitudinal research, in order to explore potential underlying mechanisms to explain the role of body image in older adults' wellbeing. However, the difficulty involved in executing longitudinal studies, both temporally and financially must be acknowledged. As such, conducting repeated cross-sectional studies may be a way to enable the observations of developmental changes whilst minimising cohort effects.

Perhaps because research has primarily viewed body image as an issue only relevant to younger women, the development of a body image instrument that is specific to the older adult population has been neglected. Whilst calculation of the internal validity using Crombach alpha with the MBSRQ subscales was, overall, .91 for men

and .89 for women, further examination of each subscale by age group yielded Cronbach alpha values ranging from .05 to .92. Given that older adults may perceive certain questionnaire items differently to younger adults, the MBSRQ, although intended for use with adults and adolescents (15 years or older) may not be the most suitable measure for body image in older adults.

When comparing the internal consistency of each of the MBSRQ subscale in the current study to adult norms (Cash, 2000) marked differences were evident. Whilst the sampling method of the current study limits generalisability of the results, such differences may indicate a need for more specific measure for older adults. Given the global trend of population ageing, the need to examine factors related to older adults' wellbeing is paramount.

Conclusion

The current study has extended previous studies by verifying the importance of considering multiple variables that influence body image. Given the different pattern of change in body image development identified, the current study has also demonstrated the importance of investigating the influence of body image variables and self-esteem separately for men and women and for smaller, more homogeneous age groups. Doing so has enabled the identification of possible differences in the development of body image during older adulthood and highlighted specific associations of certain body image variables with self-esteem as a function of age and gender.

Professionals working with older adults could benefit from understanding the meaning of body image, the factors that could affect this concept and how these may influence older adults' self-esteem. For instance, the range of strategies, such as personal grooming and physical activity that women appear to use to counter the effects of ageing, may act in a protective fashion. As such, it may be beneficial for

professionals who interact with women experiencing changes in body image as a result of ageing to promote and encourage such activities.

The salience of health issues as predictors of self-esteem indicates how closely physical and psychological wellbeing are related. While the causal direction of this relationship has not been established, promoting physical activity in older adulthood, in particular among older men, who appear to surrender to the ageing process and be more negatively affected by it, may be an effective preventive measure, which could enhance their self-esteem and overall sense of well being.

The relationship between body image and self-esteem does not appear to weaken as people age. Whilst the variables that influence body image may vary as a function of age and gender, the results of the current study have indicated that body image remains a central issue for older adults, who continue experiencing cultural pressures to conform to youthful ideals.

Given the global trend of population ageing and the fact that Australia is experiencing a significant increase in the proportion of older adults, further understanding of body image, self-esteem and their relationship is necessary in order to assist older adults to develop a positive body image that will contribute to psychosocial strengths and enhance their quality of life.

The current study makes a unique contribution to the existing body of knowledge in the area of body image and its relationship to self-esteem. Firstly, it is the first study, thus far, that focused specifically on older adults. Secondly, the results highlight the need for further studies because they reveal that body image is significant to older adults' self-esteem, which counters the previously held notion that the importance of body image diminishes as people age.

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Table I

Means and standard deviations of scores on the RSES and MBSRQ subscales by gender and age group

	Males						Females					
	65-71		72-78		79-85		65-71		72-78		79-85	
	(n = 20)		(n = 18)		(n = 12)		(n = 34)		(n = 31)		(n = 33)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
SE	4.71	.32	4.30	.41	3.99	.64	4.16	.59	4.18	.47	4.14	.61
AE	3.83	.70	3.44	.71	3.12	.67	3.29	.76	3.31	.68	3.55	.68
AO	3.32	.59	2.96	.73	3.07	.65	3.63	.55	3.66	.69	3.93	.50
FE	3.78	.50	3.48	.49	3.47	.61	3.16	.85	3.49	.78	3.56	.78
FO	3.72	.45	3.15	.75	3.07	.24	3.02	.96	3.31	.60	3.41	.64
HE	3.96	.45	3.64	.61	3.74	.64	3.55	.92	3.66	.79	3.63	.68
HO	3.97	.58	3.66	.50	3.58	.32	3.71	.61	3.84	.58	3.99	.09
IO	3.56	.84	3.27	.49	3.70	.51	3.06	.78	3.53	.73	3.74	.70
OWP	2.30	.66	1.92	.61	1.67	.43	2.55	.98	2.77	.76	2.36	.90
SCW	3.25	.57	3.39	.53	3.08	.51	3.48	.70	3.43	.44	3.17	.48

Note. SE = Self-esteem, AE = Appearance evaluation, AO = Appearance orientation, FE = Fitness evaluation, FO = Fitness orientation, HE = Health evaluation, HO = Health orientation, IO = Illness orientation, OWP = Overweight preoccupation, SCW = Self-classified weight

Table II

Standard multiple regression of body image variables on self-esteem including all respondents

Variables	SE	AE	AO	FE	FO	HE	HO	IO	OWP	SCW	B	β	sr ²
(CV)													
(unique)													
AE	.38									.18*	.23		.19
AO	.04	.40								-.03	-.04		-.04
FE	.28	.39	.15							.02	.03		.03
FO	.26	.51	.24	.53						-.04	-.05		-.04
HE	.50	.42	.15	.41	.44					.28**	.36		.29
HO	.26	.58	.49	.46	.55	.38				.06	.06		.04
IO	.07	.46	.34	.14	.31	.11	.43			-.07	-.10		-.08
OWP	-.28	-.06	.35	-.15	-.12	-.24	.05	-.05		-.11	-.16		-.13
SCW	-.22	-.45	-.19	-.24	-.20	-.14	-.35	-.41	.37	-.04	.04		-.03
Intercept = 3.203													
Means	4.24	3.43	3.53	3.47	3.29	3.67	3.82	3.46	2.36	3.32		R ² = .32 ^a	
SD	.55	.72	.68	.71	.71	.72	.54	.74	.84	.53	Adjusted R ² = .28		
												R = .57	

Note. ^a Unique variability = .11; shared variability = .21; * p< .05, ** p< .01

Table III

Standard multiple regression of body image variables on self-esteem including all respondents aged 65 to 71 years.

Variables	SE	AE	AO	FE	FO	HE	HO	IO	OWP	SCW	B	β	sr^2
(CV)													
(unique)													
AE	.53										.31	.42	.29
AO	-.05	.35									-.18	-.18	-.21
FE	.25	.37	.11								.03	.04	.04
FO	.22	.46	.01	.53							-.17	-.26	-.24
HE	.61	.45	.00	.40	.43						.33**	.46	.46
HO	.24	.64	.41	.58	.61	.32					-.02	-.02	-.01
IO	.33	.70	.25	.24	.49	.23	.58				.08	.11	.11
OWP	-.37	-.18	.31	-.13	-.26	-.37	-.01	-.09			-.09	-.13	-.14
SCW	-.38	-.68	-.13	-.23	-.41	-.30	-.37	-.48	.49		.03	.03	.02
Intercept = 3.114													
Means	4.37	3.50	3.51	3.40	3.29	3.71	3.81	3.25	2.46	3.39			$R^2 = .53^a$
SD	.57	.77	.58	.73	.86	.79	.57	.82	.84	.58	Adjusted	$R^2 = .43$	
													$R = .73$

Note. ^a Unique variability = .12; shared variability = .41; ** $p < .01$

Table IV
Standard multiple regression of body image variables on self-esteem including all male respondents

Variables	SE	AE	AO	FE	FO	HE	HO	IO	OWP	SCW	B	β	sr ²
	(CV)										(unique)		
AE	.35										.01	.02	.02
AO	.30	.64									-.08	-.10	-.09
FE	.47	.12	.20								.25*	.26	.31
FO	.47	.54	.51	.39							.18	.21	.20
HE	.51	.24	.32	.39	.45						.06	.06	.06
HO	.53	.67	.64	.21	.48	.45					.55**	.55	.40
IO	-.02	.42	.38	-.06	.16	-.21	.47				-.22	-.28	-.27
OWP	.20	.44	.50	-.08	.39	.24	.46	.05			-.08	-.09	-.09
SCW	-.10	-.25	-.15	-.00	-.15	.09	-.21	-.31	.29		-.09	-.09	-.10
Intercept = 1.977													
Means	4.39	3.52	3.13	3.60	3.36	3.79	3.76	3.49	2.01	3.26		R ² = .52 ^a	
SD	.52	.74	.66	.53	.61	.57	.52	.67	.63	.55	Adjusted R ² = .41		R = .72

Note. ^a Unique variability = .14; shared variability = .38; * p< .05, ** p< .01

Table V
Standard multiple regression of body image variables on self-esteem including all female respondents

Variables	SE	AE	AO	FE	FO	HE	HO	IO	OWP	SCW	B	β	sr^2
(CV)													
(unique)													
AE	.36										.16	.10	.17
AO	.06	.40									-.01	.10	-.01
FE	.20	.50	.26								-.01	.08	-.01
FO	.17	.49	.20	.56							-.10	.09	-.12
HE	.48	.48	.19	.40	.44						.27**	.08	.35
HO	.17	.55	.44	.57	.59	.38					-.03	.13	-.03
IO	.10	.48	.40	.20	.36	.21	.42				-.04	.08	-.05
OWP	-.39	-.22	.16	-.16	-.26	-.34	-.11	-.07			-.15*	.07	-.22
SCW	-.27	-.55	-.32	-.32	-.36	-.23	-.43	-.46	.39		-.08	.13	-.06
Intercept = 3.949													
Means	4.16	3.39	3.74	3.40	3.25	3.61	3.85	3.45	2.56	3.36		$R^2 = .33^a$	
SD	.56	.71	.59	.78	.75	.79	.56	.78	.88	.52	Adjusted $R^2 = .26$		
													$R = .58$

Note. ^a Unique variability = .13; shared variability = .20; * $p < .05$, ** $p < .01$

THE GERONTOLOGIST

General Information and Instructions to Authors

(Revised October 2004)

The Gerontologist is a bimonthly journal of The Gerontological Society of America that provides a multidisciplinary perspective on human aging through the publication of research and analysis in gerontology, including social policy, program development, and service delivery. It reflects and informs the broad community of disciplines and professions involved in understanding the aging process and providing service to older people. Articles, including those in applied research, should report concepts and research findings, with implications for policy or practice. Contributions from social and psychological sciences, biomedical and health sciences, political science and public policy, economics, education, law, and the humanities are welcome. Brief descriptions of innovative practices and programs are appropriate in the Practice Concepts section.

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